8 • COLLABORATION

The third goal of the IRCWMP is to: **"Build and sustain effective relationships among watershed agencies, landowners and community stakeholders to achieve common goals through positive collaboration and communication."**

This goal focuses on the institutional and interpersonal relationships it will take to support collaborative efforts for watershed-wide planning and implementation. As the idea of collaborative planning and governance has become more popular within the last decade, the role of collaborative networks in creating change has garnered increased attention.

This idea is not new. America has always been based on the idea of collaboration. In 1835, the French politician and social thinker, Alexis de Tocqueville, observed, "Americans of all ages, all stations of life, and all types of disposition are forever forming associations... In democratic countries, knowledge of how to combine is the mother of all other forms of knowledge; on its progress depends that of all the others." (Democracy in America)

Many people would say that America's 'social capital' has been slowly declining with the rise of inventions such as the automobile, television and personal computer, which lead us to spend less and less time with each other. While the specialization and the segmentation of the modern era serves many important purposes, we now find ourselves looking for ways to reconnect.

Elements of collaboration within this IRCWMP include governance, social networks, and education and outreach. Regional Performance Objectives have been identified in this chapter for each of these areas.

8.1 Governance

Effective governance has the following attributes, based on the following governance best practices from the Delta Vision program:

BE SPECIFIC: Define shared problems and outline finite steps to address them.

INCLUSIVENESS: Include all interest groups, including the less powerful. Network with adjoining and regional watersheds. Governing bodies are responsive to society and major constituencies. Governing bodies are accessible to all and equitable in their decisions, meeting expectations for justice in our society.

FLEXIBILITY: Be adaptive and be able to resolve conflicts. The plan can change over time to better meet its goals.

MONITORING: Create an effective institutional framework for monitoring, using experts, local knowledge and/or agencies.

TECHNICAL CONSENSUS: Have a way for technical advisory committees to incorporate local knowledge and resolve scientific differences of opinion.

BUILDING CONSENSUS: All players collaborate to find common ground and make agreements and move forward based on anticipated good-faith efforts by all stakeholders.

RESPECT: Protect local land-use decision making. Include a trust-building element into the governance structure.

FUNDING: Create reliable funding mechanisms. Implement an effective financing system that receives funds from those who benefit from use of the public resource or public policies wherever possible, including control of needed finances and sufficient legal authority

LEGAL AUTHORITY: Ensure the governing body has needed authority, can make needed decisions balancing critical values and effectively implement its decisions.

The proposed Regional Performance Objective addressing effective and participatory governance is for each agency to draft a watershed management planning policy, as part of its General Plan, that highlights its partnership with the Watershed Executive Committee for effective implementation of the Vision, Goals and Regional Performance Objectives of the IRCWMP. This is to be submitted to the WEC by 2012.

Suggestions with regard to policy coordination, planning and public works, and NPDES requirements, are listed below.

- Incorporate Delta Vision governance principles into the governance structure.
- Incorporate watershed-friendly retrofit objectives & guidelines into city General Plans.
- Conduct city planner workshops. For example, the County Stormwater Management Program conducts ongoing stormwater BMP workshops for city inspectors and planners as a requirement of the NPDES permit.
- Ensure adequate funds for IRCWMP management by promoting a watershed-wide fee. Proposition 218 requires that property-related fees be put to a vote with the consent of a two-thirds majority of the property owners. Other funding could come from cost-sharing such as the formula used by the County Nitrogen and Selenium Management Program, developer fees, business revenues, recreational or license fees, water utility fees, and wastewater system fees. Funding for projects could come from the same sources or from state water proposition grants or loans, state agencies, federal agencies or appropriations, water agency promotions or non-profit groups.
- By 2012, institute a mechanism that will fund an account to be used for paying for the next dredging of the bay, anticipated no

earlier than 2030 (added August, 2009 per Bay/Coastal water quality meeting).

- Review and revise the IRCWMP every five years.
- Participate in California Watershed Network / DWR workshops to incorporate ideas into the WMP process.

8.2 Social Networks

The various stakeholders of this Region have come together around water resources because they all share a vested interest in working as a team to manage these water resources. A formal governance structure, as discussed above, is one level of collaboration. But informal collaboration among the people within a community also affects their ability to function as a team and accomplish common goals.

Adapting principles from The Team Handbook (Scholtes, et al, 2003), successful teams must have a sense of direction, understand their connection to each other and their goals, have measures to monitor effectiveness, have decision-making authority, and have clear lines of communication. Furthermore, teams must have convenient access to experts, data, technology, and not be bogged down with red tape. "Too often management groups are inappropriately called teams when, in fact, they have no interdependent work, integrated goals, shared responsibilities or common ways of working toward results."

Building in mechanisms to create trust and foster interpersonal ties can assure that fears are addressed, conflicts worked out and all parties are heard. Important questions to ask about team members include: "What are their concerns? What do they see as risks? What are their needs and how can they be met? Do they need to see an idea in action? Do they need to see data? Do they need to talk to the people involved in the change?" (Scholtes, et al, 2003)

Regional Performance Objectives for the appropriate mechanisms of communication and interaction are only preliminarily identified here in this version of the IRCWMP. Social network analysis is a new field of social science that provides a methodology for developing a more meaningful group of indicators in future versions of this Plan. Generally, it measures the effectiveness of social relationships and interpersonal group dynamics. It uses the quality of relationships between individuals, rather than the performance of individuals themselves, as the most important indicator of organizational capability and success. Network analysis is a tool increasingly used by companies to better understand how their organizations are really functioning and what can be done to improve them. Additionally, it is used as a method for assessing collaboration among organizations as an indicator of community capacity (Singer, 2004). The research in this field provides a template for setting specific targets and tracking progress towards more collaborative solutions to water resource problems.

In particular, PARTNERS is a new social network analysis tool being developed by Danielle Varda with the RAND Corporation in Santa Monica. It stands for Program to Analyze, Record and Track Networks to Enhance Relationships. It has been used primarily by agencies to help collaborative groups understand interactions and measure change in group relationships over time. PARTNERS can evaluate group composition, quality of interactions, governance and management structures, accountability, conflict management, levels of commitment, quality and location of trusting relationships, types of influence, problem solving, and tangible or intangible group resources (Varda, 2008).

Environmental Justice Networks

It is especially important to connect disadvantaged communities into water resource communication networks. Non-profit organizations such as Latino Health Access can help planners tap into the needs of these communities. To support this kind of cross-collaboration, 100 percent of the environmental justice organizations active within the Region need to be fully aware of the IRCWMP process, the access to project funding available though this process, and how to take advantage of this funding channel.

Financial Networks

Public-private financing partnerships are another way to accomplish mutually beneficial projects and contribute to the community's economic well-being. One example of creative financing is the Orange County Great Park – Heritage Fields (Great Park Neighborhoods) partnership. Innovative funding approaches such as this require private investment that is willing to support public needs and interests. This enables the public sector to bring its resources to the table for a specific project as well. Therefore, IRCWMP projects that identify both public and private sources of funding are a good indicator that the public and private sectors have worked together to leverage the capabilities of both sectors.

Regulatory Networks

All of the Region's regulations, from Clean Water Act requirements down to city ordinances and homeowner association CC&Rs, work together to determine how land and water resources are affected by urban development. However, different regulating entities do not tend to coordinate with each other, often sending project sponsors and land managers in confusing and conflicting directions. As a result, permittees may take an unpredictable path, or whatever becomes the path of least resistance through this legal maze. Therefore, to maximize the value of regulatory processes, agencies could streamline these processes for the users and coordinate regulations among different agencies to support commonly desired outcomes. This would improve a regulation's effectiveness as a tool for implementing the Desired State for the Region's water resources.

8.3 Education and Outreach

Urban-ecosystem information systems are important tools for understanding the wide variety of information about the urban and ecosystem contexts. They include data sets for elements of watershed function, such as habitat type, soils, topography, land

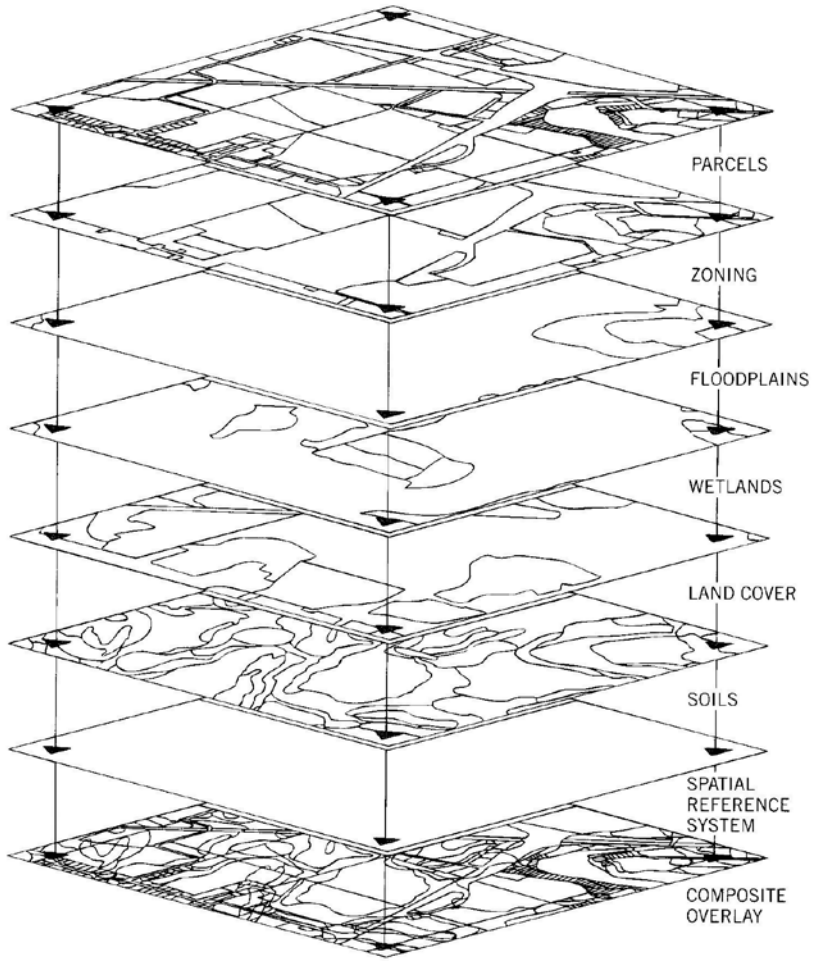

Figure 8.1 GIS Layers. Illustration of digital data layers registered to a common spatial reference system, through a connection to the National Geodetic Reference Network. Composite information maps can be produced because the spatial references match. Many types of data layers are possible, enabling a variety of suitability analyses. (Source: Nicholas Chrisman, 1997. "Exploring Geographic Information Systems". John Wiley & Sons, Inc. New York)

use, drainage infrastructure, groundwater, etc. They can also include other kinds of social or economic data, such as income levels, land use, land ownership, property boundaries, real estate prices, etc. Each data set is mapped to form a data layer. These layers are overlaid on top of each other in a Geographic Information System, or GIS. A GIS is a database of mapped data layers that show how different elements come together in a specific location, in order to illustrate relationships among them at that location. From this set of data overlays, along with a set of decision parameters, a "suitability analysis" can be conducted in order to determine constraints and opportunities for locating projects (Figure 8.1).

At present, there is no one entity that manages the Region's data as a whole. Data is housed by different agencies and by different departments within them. Each agency maintains and updates its own databases. The County of Orange has a website dedicated to this Region at www.ocwatersheds.com that posts general information and documents for downloading. Orange County also facilitates the exchange of information through its coordination work in the Executive, Management and Stakeholder Committees. The Nature Reserve of Orange County (NROC), manager of the NCCP/HCP, also has its own website and databases at www.naturereserveoc.org. RWQCB, Army Corps of Engineers, California Department of Fish and Game, cities, and various other agencies and organizations all have their own websites and databases. Newport Bay Naturalists and Friends post data on Upper Newport Bay on their website, www.newportbay.org. As a local stewardship organization with an interest in everything that affects the Region's water resources,

they have also begun to sift through data sources in the Region to identify accurate sources of data and identify additional data needs.

The new California Sustainable Watershed/Wetland Information Manager, known as CalSWIM, is a GIS of watershed-related information that is available to anyone at any time at www.calswim.org. The Newport Bay Watershed is the first area in California for which this system has collected information.

In summary, by making the Region's data more complete and interactive, stakeholders will better understand the most suitable locations for ecosystem functions, such as infiltration, habitat, water-quality treatment and stormwater retention. Urban-ecosystem information systems are a source of coordinated information that can guide the many individual actions of agencies, developers, architects, landscape designers, and planners who are responsible for integrating sustainable, ecosystem-appropriate development into the urban fabric. Convenient access to accurate data is crucial to making informed decisions and coordinating adaptive management. At present, water resource data exists in the scattered records of agencies, private companies, cities and non-profit organizations, which makes it difficult to compile an accurate picture of the hydrologic system's function as a whole. Therefore, this Plan recommends that all water resource related data be created in coordinated formats, be publicly available, and be connected through a common information portal.

The proposed Regional Performance Objective addressing stakeholder and community collaboration is for each agency to draft watershed management planning policy as part of its General Plan to promote social networking. This is to be submitted to the WEC by 2012. Suggestions with regard to environmental justice, financial, regulatory and data networks include:.

- Create a centralized data source such as a website "shopping mall" or portal.
- Utilize a wiki or other website as forum for disseminating and discussing issues and information.
- Connect disadvantaged communities to collaboration networks.
- Conduct a stakeholder survey to identify collaboration issues.
- Conduct a yearly stakeholder review to assess accomplishments and adjust objectives.
- Conduct discussions with neighboring entities.
- Increase agency collaboration and cooperation for problem solving.
- Include local and regional expertise in collaborative cross-disciplinary technical advisory committees and stakeholder meetings.

8.4 Education and Outreach

The Santa Ana RWQCB Watershed Management Initiative Chapter (November, 2004) states that priorities for grant projects shall include projects that support watershed management planning efforts, especially those that build local capacity in watershed management through citizen involvement and public education. The monitoring and data management activities discussed above also have an important role to play in education and outreach activities. The most effective way to get people engaged in their local watershed is through the idea that interesting things are happening in their community, and they can play a part in it. The monitoring data, and the changes it illustrates, is a good communication tool because it can be used to tell a story about what is happening right now and what we want to be happening in the future. In order for that to work, the data has to be understandable to the lay person. People become interested in current events that they can understand; they care about issues and places where they feel they can personally make a difference. Therefore, it will be important to provide data in a manner that is readily accessible to interested community members. This also presents an opportunity to translate for the public any successes that have occurred along the way and attract them to the process through an atmosphere of accomplishment.

Once people are interested, they may become advocates and volunteers who can be invaluable in a wide variety of ways. A good example of an organization that engages and involves the public is Heal the Bay, based in Santa Monica, California. This organization has demonstrated that once you have people's interest and involvement, it is important to have something meaningful for them to do and to show off the results afterwards so they can see their efforts matter. Locally, there are already a number of volunteer groups that will be connected to the larger IRCWMP process and leveraged through effective communication and public involvement programs such as the following:

Hands-On Learning

People learn-by-doing through activities such as water quality monitoring, native plant restoration, beach and stream cleanups, anti-litter campaigns, pollution hotlines, docent nature programs, drought-tolerant non-invasive landscaping, weather-based irrigation controllers, low impact development retrofits, and engagement in the stakeholder public processes. Opportunities for involvement can be found in the colleges, senior centers, libraries, homeowner associations, the workplace, places of worship, nurseries, museums, parks and nature centers, newspapers, TV, radio, magazines, books, Internet discussion boards and wikis, community service activities, clubs and special events such as fairs, forums and festivals.

Schools

K-12 schools, community colleges and state universities are an important way to reach people. Science and civics teaching materials, websites, clubs, field trips and community service activities are ways to integrate water resource information into the curriculum.

- Inside The Outdoors is an environmental education program administered by the Orange County Department of Education

that provides hands-on activities, daylong and overnight field trips for elementary school students. Youth groups such as Scouts, 4-H, Boys and Girls Clubs, day camps and after-school activities are also ways to involve youth. As an added benefit, children often bring materials home and educate their parents. The Orange County Discovery Science Center in Santa Ana, with hands-on science exhibits, attracts school groups and families with children.

- The Earth Resource Foundation (www.earthresource.org) facilitates high school environmental clubs (ERF Clubs) by providing materials and guidance to students and advisors. They also provide teachers with modules on watershed topics (Working at the Watershed Level Science and Stewardship Program).
- At the college level, students and professors can contribute to the knowledge base by participating in on-the-ground research studies, water monitoring or as consultants.

Figure 8.2 Boy Scouts plant a California sagebrush plant at Upper Newport Bay as part of the Adopt-a-Park restoration program.

Civic Spaces

Parks and nature centers are of particular importance as it is part of their mission to teach the public about natural systems. Watershed education opportunities abound at The

Figure 8.3 Peter and Mary Muth Interpretive Center

Upper Newport Bay Muth Nature Center, the Laguna Canyon Nix Nature Center and the future Great Park, as well as Mason and Peters Canyon Regional Parks, community parks, and smaller local nature centers. These train volunteers as docents and OC Parks trains naturalist volunteers through its Adopt A Park program. Three-dimensional models of the watershed, films, interpretive signs, docent walks, trails, ecological restoration activities, hands-on exhibits, books, clubs, demonstration gardens, native plant gardening classes, playground design, water park design and games are possible ways of engaging the public in this issue.

Professionals

Education and outreach (bilingual if necessary) can be directed toward "greening" the work of certain kinds of professionals, such as real estate managers and developers, nurseries, landscape designers and contractors, irrigation installers, landscape maintenance businesses, pesticide applicators, vector control, urban planners

Figure 8.4 Seminars held at nurseries are a way to involve the public. (Photo courtesy of Roger's Gardens)

and homeowner associations. Important issues include drought-tolerant landscaping (native or noninvasive climate-adapted plants), weather-based irrigation controllers, efficient irrigation layout and maintenance, maintenance techniques for native plants, Integrated Pest Management and low-impact design elements, such as rain gardens, cisterns, swales, rainwater detention and retention. Nurseries can be educated not to sell, or forbidden to sell, the same invasive plants that government agencies and volunteers are spending millions of dollars to eradicate in wildlands and stream channels. Nursery personnel can also be educated regarding the selection and maintenance requirements of native plants so that they can better educate the public with demonstration gardens, garden design services or one-on-one advice.

Non-Profit Sector

Non-profit environmental organizations provide another avenue for public outreach and education. Many already conduct outreach activities such as hikes, restoration, lectures, tabling events, brochures, websites, meetings, conferences, volunteer stewardship, and consultation to public agencies. Examples include the Newport Bay Naturalists and Friends, Southern California Wetland Recovery Group, California Native Plant Society, Sea and Sage Audubon Society, Sierra Club, Orange County Coastkeeper, Surfrider Foundation, Earth Resource Foundation, Laguna Canyon Foundation, local garden clubs, UC Extension Master Gardeners, UCI Arboretum, Nature Reserve of Orange County, and the Irvine Ranch Conservancy. Nationally, the Center for Watershed Protection, the River and other watershed organizations provide outreach materials and guidance to local stakeholder groups interested in raising public awareness.

Agency Programs

Agencies can and do publicize specific actions that residents, businesses and industry can take to improve watershed health. This includes both voluntary actions and those required by regulations and ordinances. Outreach materials, activities, incentive programs and policies are all tools they can use. Mailers, bus stop and bus ads, local TV station ads, radio spots and interviews, documentaries, curb stenciling, no-parking-on-street-sweeping-days signs and waste management recycling programs are some examples of how this can work to get the message out. Due to extensive public exposure, government and water agency buildings are also an ideal location

for demonstration native and drought-tolerant gardens, as well as for demonstrating landscape low-impact design (LID) elements. IRWD already conducts free irrigation audits and landscaping classes for interested homeowners to advise them on saving water. MWD and MWDOC are promoting a "be water wise" campaign and a "California Friendly" plant list. In addition, the cities and County are responsible for educating building industry and planners regarding Best Management Practices and for enforcing NPDES permit regulations. The Newport Coast Watershed Program provides educational opportunities for city staff, community members and stakeholders in watershed science and management skills. They also enlist community support in monitoring and restoring the health of the watersheds and marine life refuges. Diverse ethnic populations may require multi-lingual materials or advertisements.

The proposed Regional Performance Objective addressing stakeholder and community collaboration is for each agency to draft watershed management planning policies as part of its General Plan to build local stewardship capacity in watershed management through citizen involvement and public education. This is to be submitted to the WEC by 2012. Suggestions with regard to hands-on learning, schools, civic spaces, professionals, non-profit sector and agency programs are discussed in the following sections.

- Integrate watershed science into K-12 science curriculums.
- Increase the number of community college classes related to watershed subjects and skills needed.
- Increase the number of four-year-college classes related to watershed subjects and skills needed.
- Increase community volunteer participation.
- Increase awareness of stakeholder meetings.
- Continue and expand NPDES permit BMP education for the building and planning industry (DAMP).
- Provide educational support for low water use landscape design and maintenance.
- Balance public access to open space with habitat protection through docent-led hikes.

References

- CALFED Delta Vision and Science Workshop Essays. 2007. www.science.calwater.ca.gov :
  - Innes, Judith. 2007. "Reflections on Governance Issues Raised in the Visions for the Delta."
  - Norgaard, Richard. 2007. "Aims of Governance Change for the Future of the Sacramento-San Joaquin Delta."
  - Sabatier, Paul. 2007. "Governance Issues Which Need to Be Addressed in Visions of the Delta."
  - Silva, J. Fred. 2007. "The Lesson Learned, Perspectives on Governance and Finance of Three Complex Ecosystem Restoration Programs."
* CALFED Delta Vision Blue Ribbon Task Force Report. 2008. **deltavision.ca.gov**
- California Watershed Network **www.watershednetwork.org**
- City of Irvine. 2007. Orange County Great Park Master Plan
- County of Orange. 2007. Central Orange County Integrated Regional and Coastal Watershed Management Plan, Phase 1
- Alexis de Tocqueville, 1835, *Democracy in America*
- Scholtes, Peter R., Brian L. Joiner, Barbara J.Streibel. 2003. The Team Handbook, Third Ed. Oriel Inc., Madison, WI.
- Singer, Helen Harber, MPH, Michelle Crozier Kegler, DrPH, MPH. 2004. Assessing Interorganizational Networks as a Dimension of Community Capacity: Illustrations From a Community Intervention to Prevent Lead Poisoning. Health Education & Behavior, Vol.31(6):808-821(December).
- Tri-state Water Quality Council. **www.tristatecouncil.org**
- U.S. Army Corps of Engineers. 2005. Newport Bay/San Diego Creek Watershed Management Plan, Watershed Studies Section, Plan Formulation Branch, Planning Division, Los Angeles District **www.ocwatershed.com/watersheds/pdfs/Newport_Bay_Watershed_Plan_04-12-15.pdf**
- Varda, Danielle M. 2008. "Strategic Network Management of Community Collaboration, From Theory to Practice." Presentation. RAND Corporation
- Westefer, Paul. 2008. Southern California Wetlands Recovery Project, Orange County Task Force. E-mail notification, Jan. 16, 2008. **www.scwrp.org**